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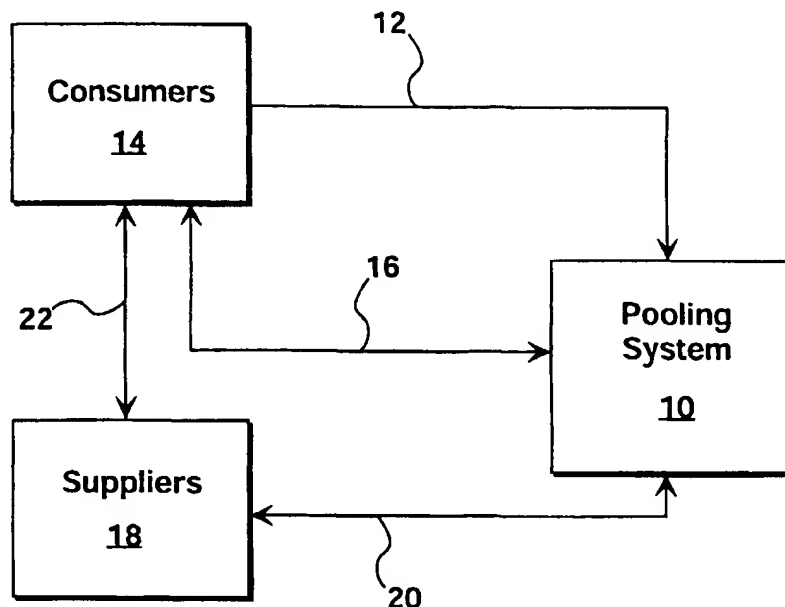
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(54) Title: INTERNET GROUP POOLING SYSTEM AND METHOD WITH CONSUMER INTERACTIVITY



(57) Abstract: A method of pooling the purchasing power of a plurality of consumers. The method includes pooling the consumers in an Internet-based pool and notifying the consumers when the pool reaches a predetermined threshold, wherein the notifying is performed by a pooling system. The method also includes accepting votes whether the pool should be bid upon by at least one supplier, wherein the voting is performed by the consumers, opening the pool to bids, and accepting at least one bid upon the pool, wherein the bidding is performed by the at least one supplier.

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# INTERNET GROUP POOLING SYSTEM AND METHOD WITH CONSUMER INTERACTIVITY

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## CROSS-REFERENCE TO RELATED APPLICATIONS

(Not applicable)

## 15 STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH

(Not applicable)

## BACKGROUND OF THE INVENTION

### Field of the Invention

The present invention is directed generally to a system and method for pooling  
20 using the Internet and, more particularly, to a system and method for pooling consumers  
using an interactive pooling system to increase consumer value and enhance consumer  
purchasing power.

### Description of the Background

Many industries are structured such that those customers which purchase in bulk  
25 quantities achieve substantial savings. For example, large commercial entities receive

lower utility rates because of their consumption volume. Such discounts do not extend to individual consumers and small businesses because of their relatively low consumption volume. Thus, it would be advantageous for individual consumers and small businesses to pool their purchasing needs to achieve a relatively high consumption volume. This  
5 advantage can be realized in industries such as the utility industries because recent deregulation of the retail portions of those industries has increased competition and consumer choice.

The Internet is an effective method of communicating and thus provides an effective and efficient platform for pooling customer needs. Approximately 50 million  
10 households presently have personal computers. By the year 2000, it is expected that 50 percent of the nation (125 million) will be wired to the Internet. The Internet provides efficiencies to business processes, which reduces overall costs within segments of the value chain. In addition, the Internet is also capable of reaching customers who are beyond the reach of salespeople using unobtrusive methods and the Internet operates 24  
15 hours a day. It also provides a continuous market presence without the significant addition of staff.

There exist Internet-based systems which allow consumers to pool their purchasing power. For example, the assignee of the present invention provides an Internet-based system which allows consumers to pool their electricity buying needs at the  
20 url [www.electricitychoice.com](http://www.electricitychoice.com). Consumers may sign up at [electricitychoice.com](http://electricitychoice.com) to participate in an aggregated buying electricity pool. When the buying pool reaches a certain threshold, e.g. 2 megawatts, electricity providers are invited to bid on supplying the electricity needs to the members of the pool in the aggregate. The low-bidder then contacts each consumer individually and invites them to become customers of the bidder.

A similar system exists at the url [www.energy.com](http://www.energy.com), where “energy buying groups” are formed to enjoy the benefits of consumer aggregation. Another system exists at the url [www.essential.com](http://www.essential.com), where bundles of services such as, for example, electricity and telephone services are offered at a discount over the price of the sum of the individual  
5 services.

Internet-based buying pools are not limited to the utility industries. For example, a purchasing pooling service operates at the url [www.mercata.com](http://www.mercata.com). At [mercata.com](http://mercata.com), products are listed for certain time periods and customers are invited to sign up to purchase the product. As more consumers sign up to purchase the product, the price  
10 drops due to the collective purchasing power of the consumers desiring to purchase the product. At the end of the time period, the price for the listed product may be lower due to the discounts normally offered to bulk purchasers of merchandise. A similar system exists at the url [www.accompany.com](http://www.accompany.com). None of the aforementioned Internet-based pooling systems allows for interactive involvement by the consumers which use the  
15 systems.

Thus, there is a need for a system that enables consumers to save money by allowing them to participate in an aggregated buying pool which allows the consumers to interact with the system.

## SUMMARY OF THE INVENTION

20 The present invention is directed to a method of pooling the purchasing power of a plurality of consumers. The method includes pooling the consumers in an Internet-based pool and notifying the consumers when the pool reaches a predetermined threshold, wherein the notifying is performed by a pooling system. The method also includes

accepting votes whether the pool should be bid upon by at least one supplier, wherein the voting is performed by the consumers, opening the pool to bids, and accepting at least one bid upon the pool, wherein the bidding is performed by the at least one supplier.

The present invention represents a substantial advance over prior methods of  
5 consumer purchasing. The present invention has the advantage that it enables consumers to save money by allowing them to participate in an aggregated buying pool that allows for interaction by the consumers with the system.

#### BRIEF DESCRIPTION OF THE DRAWINGS

For the present invention to be clearly understood and readily practiced, the  
10 present invention will be described in conjunction with the following figure, wherein:

FIG. 1 is a diagram illustrating an Internet pooling method in which consumers may interact with a pooling system;

FIG. 2 is a diagram illustrating an embodiment of a system in which the method of FIG. 1 may be implemented;

15 FIG. 3 is a diagram illustrating a three-tier logical representation of the system of FIG. 2;

FIG. 4 is a diagram illustrating a purchasing system in which the system of FIG. 2 may be used; and

FIG. 5 is a diagram illustrating a process used by the webserver of FIG. 2 to ensure  
20 system security.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention uses a "power of group" buying strategy to create volumetric pools of consumers who sign-in and grant the owner, or administrator, of the

system of the present invention (the Internet website owner) the authority to bid power contracts on their behalf while allowing the consumers to retain control of the bidding process through the use of consumer interaction within the system. The consumers receive volume discounts which otherwise are not possible. With contractual agreements of, for example, 1-2 years, seller companies can retain existing customers and acquire new ones at minimal marketing and advertising cost. Although the present invention is generally described herein as applying to the utility (e.g. electricity) industries, the teachings of the present invention can be extended to other industries such as, for example, the airline, legal, auction, automotive, banking, business, computer, ecology, education, election, entertainment, finance, gambling, natural gas, gift, healthcare, home loan, insurance, Internet, investment, job, loan, nutrition, restaurant, real estate, retirement, shopping, technology, telephone, toy, university, vacation, weight loss, and wine areas, fields, and industries.

Residential and small business consumers represent the largest segment of certain industries such as the energy industry. These consumers need an independent point of presence in the marketplace that effectively pools their interests. This pooling is referred to as "aggregation" and, with Internet technology, it is effectively achieved. The aggregation process has the immediate effect of enhancing the stature of an individual consumer and uplifting them to a negotiating power base equivalent to that of a large consumer. Because large consumers are the primary beneficiaries of, for example, energy deregulation, the present invention results in lower purchasing costs for each of its members.

FIG. 1 is a diagram illustrating an Internet pooling method in which consumers may interact with a pooling system 10. At step 12, small business and home consumers

14 sign up to join a pool within the pooling system 10. The pooling system 10 may be a website, or web server, the details of an embodiment of which are described hereinafter in conjunction with FIG. 2. For pooling in the electric industry, two pools can be created - business and residential - based on the differing needs of the consumers 14. Within each  
5 pool, there may be preferences, e.g. least cost and green power.

Once a pool obtains critical mass, for example 10 million kWh in a given region or a certain aggregate dollar value, all consumers 14 in the pool are contacted at step 16 to ensure that they are still interested in participating, thus minimizing pool attrition. The contact can be through, for example, email, telephone, or facsimile transmission. At step  
10 16, the consumers 14 in the pool are also solicited for feedback as to whether the pool should be taken to market (i.e. open to bids by the suppliers 18) at the level at which the system 10 determined the critical mass was available. The system 10 can direct the consumers 14 in the pool to, for example, an embedded url within a webserver of the system 10 where certain historical data such as, for example, the price per kWh that a  
15 certain supplier has recently offered to other consumers in the same geographical region as the consumers 14 in the pool or prices that were obtained from certain suppliers in prior buying pools.

The information presented to the consumers 14 in the pool at step 16 introduces the consumers 14 in the pool to the dynamics surrounding the choice of energy supplier.  
20 The consumers 14 in the pool may have two or three items of information presented to them to weigh in making a decision as to whether to take the pool to market. For example, the consumers 14 in the pool could be presented with external forces that may affect the price of energy such as, for example, weather or futures trading. Also, the consumers 14 in the pool can be alerted to possible bundling deals in which certain of the

suppliers 18 may offer a package of services such as, for example, electricity, Internet access, and telephone. Also, a supplier 18 may offer incentives such as air miles or phone cards. Once each of the consumers 14 in the pool decide individually whether the pool should be taken to market, each consumer 14 in the pool can vote, using a yes/no question, as to whether that consumer 14 believes the pool should be taken to market. If a majority of the consumers 14 in the pool vote "yes", the pool is taken to market. Those consumers 14 in the pool which vote "no" are presented with the option of leaving the pool and joining any other newly formed pools, if any.

An example of a decision with which a consumer is faced is as follows. If a particular supplier offers rates at a minimum of 5000 consumers with perks and another supplier offers rates at a minimum of 2000 consumers, the consumers 14 in the pool will have to decide whether to take the pool to market at a size of 2000 or wait until the pool reaches 5000 consumers. Such a situation would give each of the consumers 14 in the pool an incentive to increase the number of consumers 14 in the pool by encouraging others to sign up for the pool.

If a majority of the consumers 14 in the pool, after considering the information presented, vote using the web page to take the pool to market, the pool is taken to market to get the best rate for the pool and suppliers 18 may submit bids to meet the needs of the pool at step 20. When a supplier 18 submits a low bid, the winning supplier contracts with the consumers 14 in the pool at step 22. The names in the pool are given to the supplier 18, which enrolls the consumers 14 in the pool and takes responsibility for forming contracts at the bid-upon rates. The operator of the pooling website 10 retains an online link, and can aid the supplier 18 with customer service and satisfaction.



Renewable twelve (12) to twenty-four (24) month contracts between the supplier 18, the consumers 14, and the website operator can be used. For a twelve-month contract, the consumer 14 is automatically added back in the pool in the eleventh month to see if a better deal is available. The website operator can continue to get monthly updates from the suppliers 18 about, for example, power usage.

FIG. 2 is a diagram illustrating an embodiment of a system 30 in which the method of FIG. 1 may be implemented. In FIG. 2, the pooling system 10 is implemented using a Microsoft Windows NT server. The server 10 includes a database server 32 which can be, for example, Microsoft SQL Server 7.0. The database server 32 includes a central database 34, which stores all pertinent information including, for example, the average monthly consumption of the consumer 14 in the pool. An ActiveX Data Object (ADO) interface 36 is used to access the database 34 via an open database connectivity (ODBC) link 38.

The server 10 also includes an active server page (ASP) mail application 40, which can be used to send email to, for example, the consumers 14 and the suppliers 18. A Microsoft Internet information server (IIS) 42 includes an ASP module 44, which is used to dynamically create ASP web pages 46. The ASP technology employed can use, for example, the JavaScript or Visual Basic scripting languages. The module 44 includes those ASP standard modules necessary for the operation of the IIS server 42 including: a server module 48; an application module 50; a session module 52; a request module 54; and a response module 56.

The server 10 is connected to the Internet 58 via a TCP/IP link 60. The system 30 can also have a firewall 62 interposed between the Internet 58 and the server 10 to protect the integrity of the server 10. The firewall can be, for example, a firewall sold by Cisco

Systems, Inc. The consumers 14 (and the suppliers 18) are linked to the Internet 58 via TCP/IP links 64. Thus, when a consumer 14 or a supplier 18 requests a web page 46, the server 10 can dynamically generate the page 46 and send the page to the browser of the consumer 14 or the supplier 18 via the Internet 58.

5       The SQL server 32 and the IIS 42 can be implemented on one computer or may be implemented on separate computers.

FIG. 3 is a diagram illustrating a three-tier logical representation of the system 30 of FIG. 2. At the first layer (database layer) of the system 30, the database 34 stores the data necessary for the operation of the system 30. At the second layer (business layer),  
10   component object model (COM) components 66, 68, and 70 are used to implement each portion of the system 30 which interacts with the database 34 using the BODT layer and also the portion of the system 30 at the third layer (presentation layer). A customer component 66 is responsible for accessing data which are used to create web pages 46 that are used to manage the relationship between the server 10 and the consumers 14. A  
15   choice component 68 is used to access data that are used to create web pages 46 that are used to manage the interaction between the consumers 14 and the server 10 when the consumers 14 may vote as to whether a pool should be taken to market. A mailer component 70 is used to create email which is sent to the consumers 14 and the suppliers 18 when necessary. The components 66, 68, and 70 may be distributed using distributed  
20   component object models (DCOM) for load balancing. The components 66, 68, and 70 can also run under the Microsoft MTS environment for distributed processing.

FIG. 4 is a diagram illustrating a purchasing system 72 in which the system 30 of FIG. 2 may be used. The central database 34 may be used to store data which may relate to any number of types of pooling on the Internet. For example, the consumers 14 may

desire to enter pools relating to, for example, electricity, natural gas, or Internet access.

The consumers 14 would thus access the server 10 and choose which type of pool to enter based on their needs. The server 10 thus manages multiple types of pools and manages the relationships between the consumers 14 and the suppliers 18 while presenting a  
5 seamless system in which the consumer 14 can have their purchase needs in a variety of areas met.

FIG. 5 is a diagram illustrating a process used by the webserver 10 of FIG. 2 to ensure system security. The process of FIG. 5 could be implemented using, for example, any or all of the following: the firewall 62; a domain-based NT security scheme which is  
10 integrated into the SQL server 32; or limiting access to the server 10 to those who have a valid password (i.e. password-protected access). At step 74, access validation starts by checking to ensure that an Internet server initiated the request for access to the server 10. If an Internet server requested access, the IP address of the server attempting access is checked to ensure that it is permitted. If the IP address is permitted, the server 10 checks  
15 to ensure that the user is permitted to access the server at step 78. If the user is permitted to access the server, the Internet server permissions are checked at step 80. If the Internet server permissions allow access, the NT file system (NTFS) permissions are checked at step 82 to determine if access is permitted. If at any one of the steps 74, 76, 78, 80, or 82 it is determined that access is not permitted, access is denied at step 84. If at all of the  
20 steps 74, 76, 78, 80, and 82 it is determined that access is permitted, access is granted at step 86.

While the present invention has been described in conjunction with preferred embodiments thereof, many modifications and variations will be apparent to those of ordinary skill in the art. For example, the system and methods of described herein can be

augmented by, for example, artificial intelligence (AI) technology. Also, instead of using ASP technology, the system and methods described herein may use common gateway interface (CGI) or Java technologies. The foregoing description and the following claims are intended to cover all such modifications and variations, as well as any other applicable  
5 technologies which may appear in the future.

## CLAIM

We claim:

1. A method of pooling purchasing power of a plurality of consumers,  
comprising:
  - 5 pooling the consumers in an Internet-based pool;  
notifying the consumers when the pool reaches a predetermined threshold,  
wherein the notifying is performed by a pooling system;  
accepting votes whether the pool should be bid upon by at least one supplier,  
wherein the voting is performed by the consumers;
  - 10 opening the pool to bids; and  
accepting at least one bid upon the pool, wherein the bidding is performed by the  
at least one supplier.
2. The method of claim 1, further comprising forming a contract between the at  
least one supplier and the consumers.
- 15 3. The method of claim 1, wherein notifying includes notifying the consumers  
using one of email, telephone, and facsimile transmission.
4. The method of claim 1, wherein accepting votes includes accepting votes at a  
web server.
5. The method of claim 1, further comprising providing data to the consumers  
20 regarding external forces that may affect bid pricing.
6. The method of claim 1, wherein opening the pool to bids includes opening the  
pool to bids when a majority of the consumers vote to open the pool to bids during voting.
7. A pooling system, comprising:  
a database; and

a server in communication with the database, wherein the server contains a set of ordered data and instructions which, when executed by the server, cause the server to perform the steps of:

- pooling a plurality of consumers in an Internet-based pool;
- 5 notifying the consumers when the pool reaches a predetermined threshold;
- accepting votes whether the pool should be bid upon by at least one supplier, wherein the voting is performed by the consumers;
- opening the pool to bids; and
- accepting at least one bid upon the pool, wherein the bidding is performed
- 10 by the at least one supplier.

8. A pooling system, comprising:

- means for pooling a plurality of consumers in an Internet-based pool;
- means for notifying the consumers when the pool reaches a predetermined
- threshold;
- 15 means for accepting votes whether the pool should be bid upon by at least one supplier, wherein the voting is performed by the consumers;
- means for opening the pool to bids; and
- means for accepting at least one bid upon the pool, wherein the bidding is performed by the at least one supplier.

20 9. A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to perform the steps of:

- pooling a plurality of consumers in an Internet-based pool;
- notifying the consumers when the pool reaches a predetermined threshold;

accepting votes whether the pool should be bid upon by at least one supplier,  
wherein the voting is performed by the consumers;

opening the pool to bids; and

accepting at least one bid upon the pool, wherein the bidding is performed by the  
5 at least one supplier.

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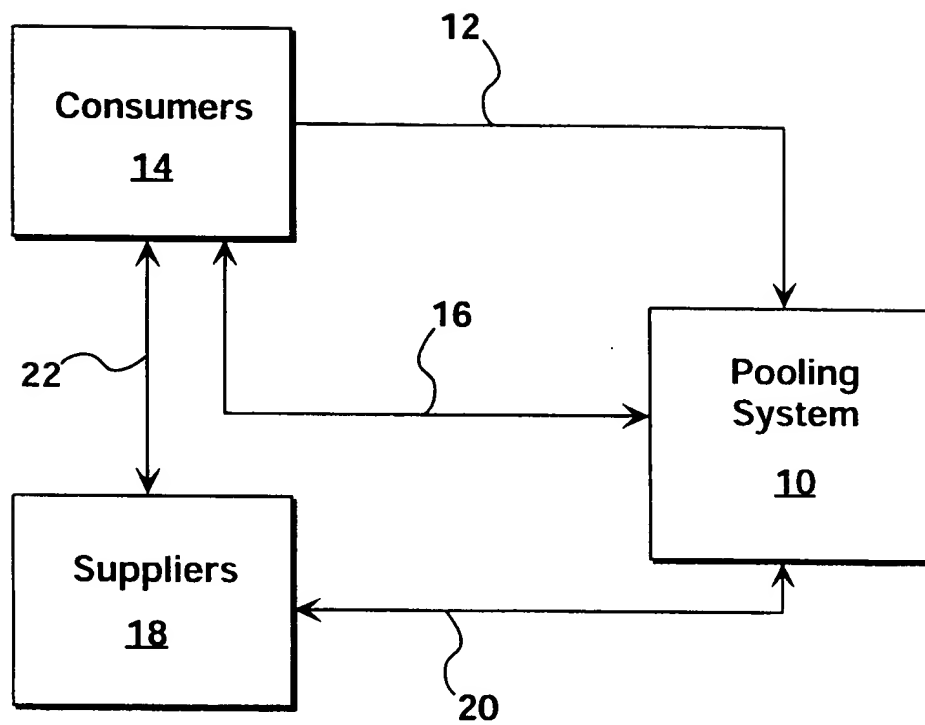


FIG. 1



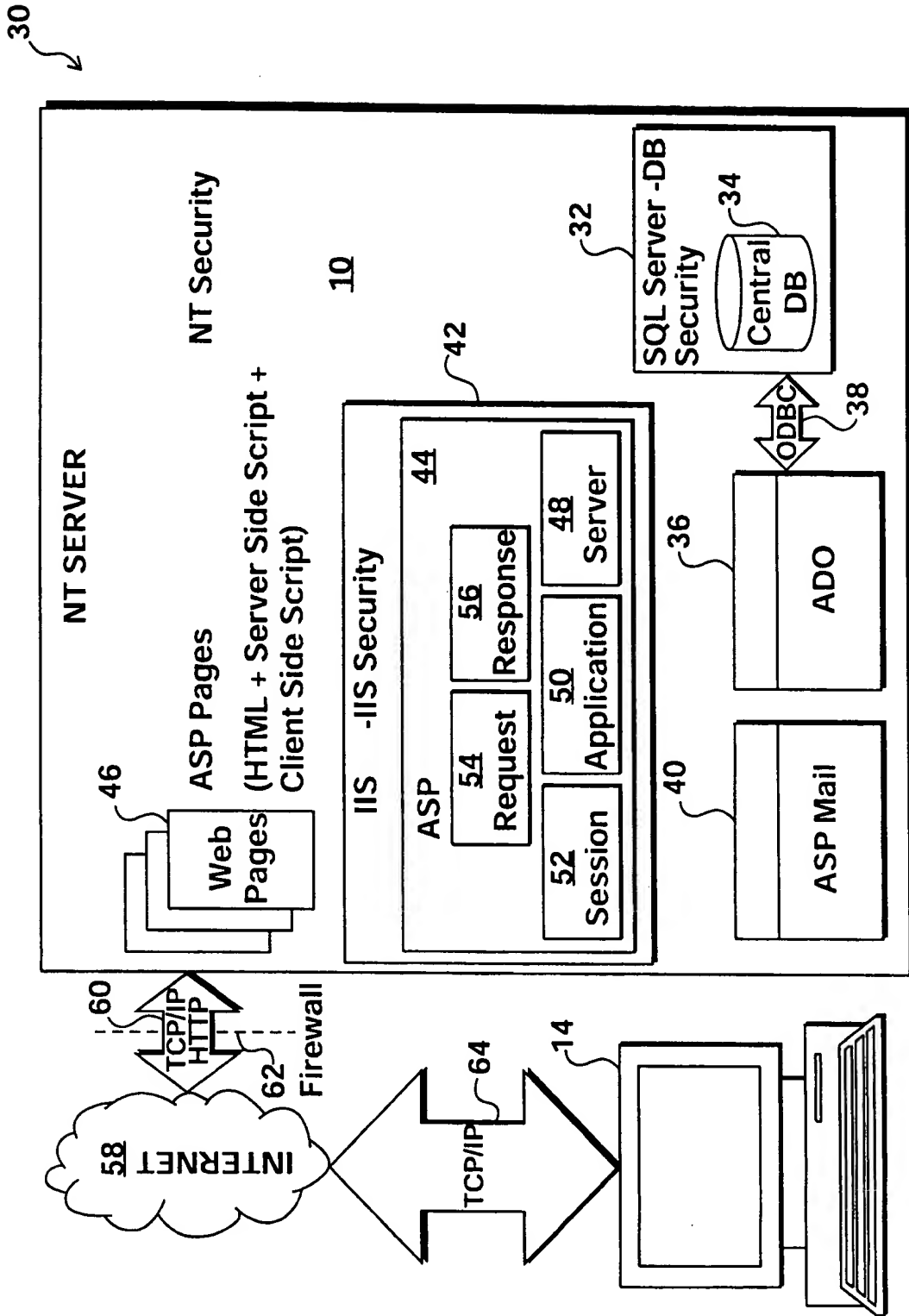
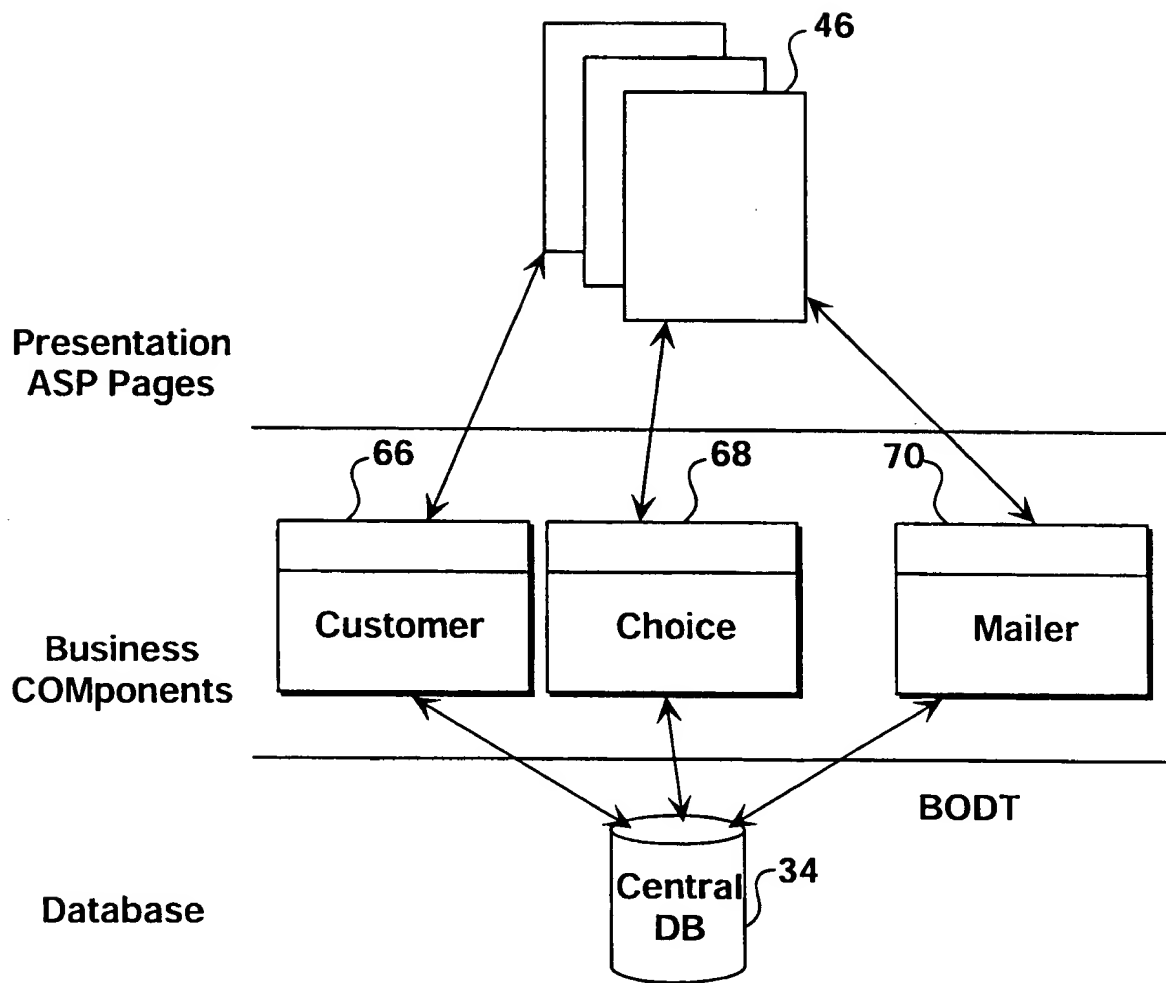


FIG. 2

**FIG. 3**

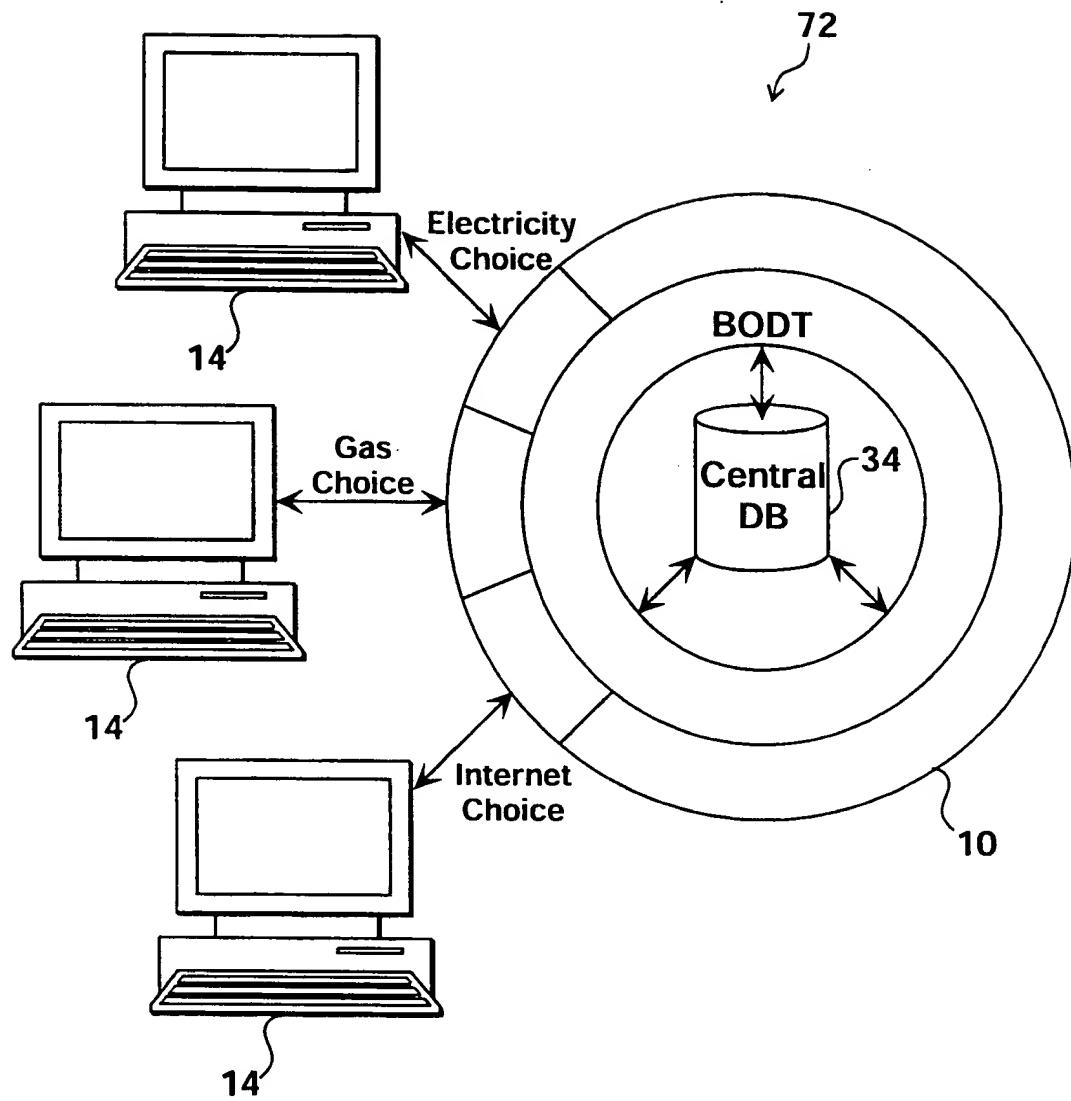


FIG. 4

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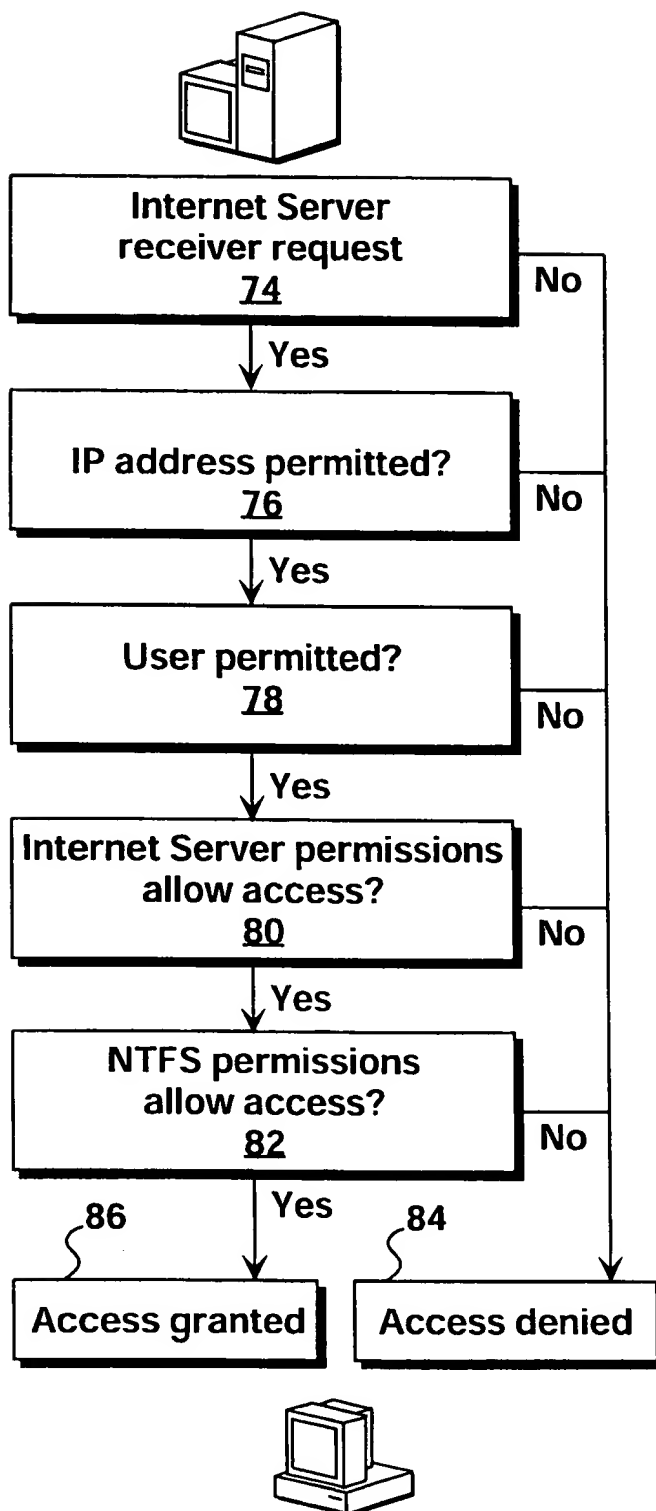


FIG. 5